REMARKS

The oath or declaration stands rejected as defective because it did not contain the citizenship of the inventor. A new oath or declaration has been executed and is attached.

Claims 1-28 stand rejected under 35 U.S.C. § 112, second paragraph as indefinite. In response to these rejections, the claims have been amended as follows:

Claims 1, 7-8, 17, and 26-27 have been amended to clarify that these test values correspond to test values of the same target analyte that was measured in the control pool.

Claims 3-4, 7-16, 10-11, 16-17, 19-20, 23 25-26 have been amended to properly depend from their corresponding independent claims and correct inadvertent errors.

With respect to claims 16 and 25, an equation for calculating "residual RMS error" is discussed at page 9, line 3-10 of the application.

With respect to claim 28, the term patient distribution index is discussed at page 8, lines 20-23 of the application, with reference back on how to determine the index. The patient distribution index is not limited to only containing values for the same target analytes. Indeed, the purpose of the index is to allow the inclusion of more data about the individual patient than merely a single test result. Applicants respectfully submit that the discussion at page 7, line 17 to page 8, line 23, as well as Example 4, C makes this term sufficiently definite to satisfy the requirements of the second paragraph of 35 U.S.C. § 112.

In view of the above amendments, applicants assert that all §112 rejections have been overcome. No new matter has been added. Applicants respectfully request reconsideration and withdrawal of these rejections.

Claims 1-28 stand rejected under 35 U.S.C. § 103(a) in view of Klee (Clinica Chimica Acta) and Smith (Clinical Chemistry).

Both of these articles address quality control monitoring, which is a process used in clinical laboratories to track the performance of testing over time. Controls are generally used to detect changes in testing by running controls a number of times, and setting control limits based on the mean and standard deviation of those measurements.

Smith teaches an alternate procedure for a continuous signal patient data QC procedure, entitled TEAMM. TEAMM uses a "doubly smoothed" procedure to create an exponentially adjusted moving mean after each test result. This procedure is directed a detecting changes in the testing process over time. Smith states that the procedure described identifies bias faster than other methods compared in the article. Smith discusses different ways that the results of the test can be used. First, the results of the TEAMM calculation can be used as a signal to reject a run of samples. Second, they can be used as an indicator of when to run a known-value control. These are the same responses to an out of control result using standard mean and standard deviation control limits.

Klee discusses analytic bias and analytic imprecision, and argues that analytic bias is more important in medical diagnosis. The article then teaches a method for setting analytic tolerance limits as discussed on pages 181-182. The tolerance limits are set initially, from the results of the initial 20 data sets. Once determined, the tolerance limits are subsequently used like normal control limits to help identify possible bias in the analytical test. Klee teaches that analytic bias which is less than 1/4 of the combined analytic and biologic variation will have minimal effect on medical decisions. However, the limits proposed by Klee are tighter than the performance limits found with the standard calibration process used by diagnostic reagent manufacturers. Therefore, there is a need to improve the calibration process in order to provide improved accuracy.

The process described in the current application addresses this need. The application contains a calibration adjustment method that utilizes a combination of quality control materials with assigned target values and distributions of patient test values. This novel calibration adjustment builds upon earlier quality control techniques to help achieve tighter performance goals.

In both Smith and Klee the tolerance or control limits are set prior to testing patient samples. Klee teaches a method of establishing those initial tolerance limits. Smith teaches a method for doubly smoothing patient results as a faster method for identifying test bias.

In contrast, independent claims 1, 8, 17, and 26-27 require determining tolerance limits from the control pool data **and** the patient specimen data. Then, when necessary, adjusting the calibration occurs when certain criteria are met. Example 4 in the specification provides one example of how this might be done. Similarly, claims 7 and 28 require determining tolerance limits for the maximum allowed variation of the serum control rule **and** the patient distribution index. Neither Klee nor Smith, whether considered alone or in combination, teach or suggest determining tolerance limits and adjusting calibration using both control pool data and patient specimen data. For at least this reason, Applicants respectfully submit that the subject matter of the amended claims is not obvious under 35 U.S.C. § 103(a) over Klee and Smith.

Reconsideration and withdrawal of the cited rejection are respectfully requested, and allowance of the amended claims at an early date is solicited. Enclosed are a $36.00 check for excess claim fees and a $475.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

If questions remain regarding the above, please contact the undersigned.

Respectfully submitted,

Date: March 4, 2004

H. Sanders Gwin, Jr.
Reg. No. 33,242

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

60193654.doc